

STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE



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In accordance with 50 IAC 21, the Department of Local Government Finance developed adjustment factors for each major class of property within Calumet Township in Lake County for the 2009 pay 2010 assessment year. These factors are as follows:

- | | |
|------------------------|----------------|
| • Vacant Industrial | 0% (No Change) |
| • Improved Industrial | 2% |
| • Vacant Commercial | 0% (No Change) |
| • Improved Commercial | 2% |
| • Vacant Residential | -2% |
| • Improved Residential | -2% |

This document explains how these factors were calculated.

Vacant Residential:

Vacant Residential factors were calculated using the ratio study Calumet Township submitted on 12/29/2009. In all 25 sales were marked valid for trending, however, 2 sales were excluded because these parcels had a Class Code of 510 which is coded as Improved Residential. After excluding those two parcels from my study, I calculated the AV difference between 2008 Total AV's and the 2009 Total AV's. After this, I calculated the Percent Change between 2008 Total AV's and 2009 Total AV's. Finally, I calculated the Median value of all the Percent Changes that each parcel experienced and arrived at the value of -2%. This value was corroborated by a study of North and Hobart townships, which are adjacent to Calumet Township.

Improved Residential:

The factor for residential improved property was determined by constructing an automated valuation model (AVM) based on 2008 sales data of residential improved properties in Calumet Township. These models are used in mass appraisal to determine the main components of value of a group of subject properties.

The model was calibrated using 1011 sales of Calumet Township residential improved properties from the year 2008. Only sales marked "Valid" for trending were used and only sales with a class code of 510 were used as well. This was done because if one were to include all classes of Residential Improved property into an AVM model such as the one that was used here, the variance between single-dwelling homes and other residential class properties such as multi-family dwelling homes (apartments, mobile homes, and condominiums) would have been too great and would of adversely affected the model. Outliers (properties with unusually large or small sale prices) were identified and excluded before estimation.

In accordance with the International Association of Assessing Officials (IAAO) 2003 *Standard on Automated Valuation Models*, multiple regression analysis was used to estimate the principal components of value. These were determined to be:

Price Per Square Foot
Half or Full Basement or No Basement
Effective Age
Garage Square Footage
Grade
Condition
Acreage

As a whole, these three variables accounted for 76.4% of the total variation in sales price for residential improved property in Calumet Township. The impact of additional variables, such as number of bedrooms, was also examined; none significantly increased the model's goodness of fit.

After estimation, a ratio study was conducted for the county based on the estimated assessed values. The median ratio was 1.023, indicating that residential improved property in Calumet Township needed to have an adjusted trending factor of -2% (rounded) in order to bring the ratio to 1.00%.

Commercial and Industrial Vacant:

For the analysis of Commercial and Industrial Vacant properties in Calumet Township, several approaches were used to analyze these two classes of property. Due to a insufficient number of sales in Calumet township alone, (3 sales in Commercial Vacant and 2 sales in Industrial Vacant) a study of surrounding townships was also performed. Due to there close proximity to Calumet Township, the two townships that were analyzed were Hobart and North Townships. In North Township, there were 15 Vacant Commercial Sales which were used in the Ratio Study submitted on 12/10/2009. A median value was calculated based on the Percent Changes between 2009 Total AV and 2008 Total AV. This median value was 0%, indicating no change among the vacant parcels in this given area. This was consistent with what the sales data showed in Calumet's Ratio Study of Vacant Commercial Properties. Vacant Industrial was slightly more difficult to calculate. Upon further review of the two surrounding townships (Hobart and North) it showed that there were not a significant number of sales to study for trending. Examination of Calumet's Ratio Study for Industrial Vacant showed that the two sales that they submitted yielded no change between 2008 Totals and 2009 Totals which suggests that the factors did not change so the Department kept the 2008p2009 Factors at 0% or No Change. While North Township had 5 sales which is sufficient for the trending process, when an analysis was conducted it yielded a decrease; however, due to the use of a multi-parcel sell and the fact that only 5 sales were used, there is not enough market data to justify a decrease or increase in the trending factors.

Commercial and Industrial Improved:

Commercial and Industrial Improved factors were developed using Marshall and Swift Cost Tables from 2007 and 2008 for the surrounding metropolitan areas of Chicago and Fort Wayne.